



Application No. 10/539,562

Interview with Examiner

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## Agenda



- Overview of Claimed System and Method
- Differences in References

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## Draft Claim Amendment (temperature regulation of slides in continuous loading system)



75. (Currently Amended) An automated sample processing system for processing at least one sample on at least one carrier according to a processing protocol, comprising: at least one removable reagent container positioned within a first plurality of drawers in a reagent section; carrier retention devices for retaining said sample during said processing, the devices being positioned within a second ~~and a third~~ plurality of drawers in at least two one carrier section[s], ~~respectively, the at least two carrier sections being separated by the reagent section;~~ an active temperature regulation element to which said at least one sample is responsive, wherein said active temperature regulation element regulates the temperature of said at least one sample at a set point and to within a tolerance specified by the protocol; and a moveable robotic member for dispensing fluid on the at least one carrier; wherein the at least one carrier is inserted or removed during the processing protocol without interrupting a processing of another sample movement of the robotic member.

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# Draft Claim Amendment (temperature regulation of reagents in drawers of continuous loading system)



102. (Currently Amended) An automated sample processing system for processing at least one sample on at least one carrier according to a processing protocol, comprising:

- at least one container having a reagent therein positioned within a first plurality of drawers in a reagent section for application to said at least one sample during said processing;

- carrier retention devices for retaining said sample during said processing, the devices being positioned within a second and a third plurality of drawers in at least two carrier sections, respectively, the at least two carrier sections being separated by the reagent section;

- a reagent temperature control element to which said reagent in said at least one container is responsive;

- a sample temperature control element to which said at least one sample is responsive, wherein said sample temperature control element regulates the temperature of said at least one sample at a set point and to within a tolerance specified by the protocol; and

- a moveable robotic member for dispensing fluid on the at least one carrier; wherein the at least one carrier is inserted or removed during the processing protocol without interrupting movement of the robotic member

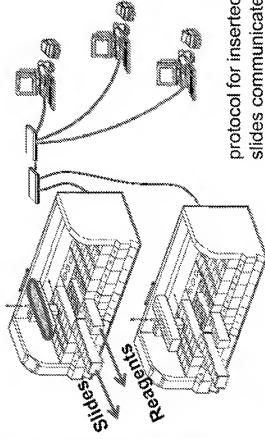
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# Continuous Workflow Stainer Network vs. Batch Mode Systems Cited



## Applicant – continuous staining network

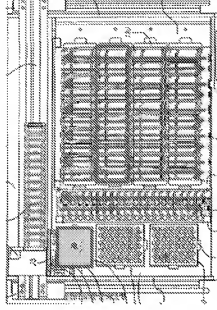
insert/remove slide racks & reagent racks while  
robot continues processing other racks



software monitors  
insert/remove while  
continuing to process

protocol for inserted  
slides communicate via  
network

## Kalra – batch staining



When users opens lid, robot stops (for safety reasons)

User can request to load stat or continuous slides wherein insertion or removal of slides/reagents necessarily interrupts **robotic** processing of other slides in other trays since **dispensing robot must stop moving and apparatus completes processing on a tray and then signals user**

## Reichler – batch processing



samples loaded /  
unloaded prior to robotic  
processing, not during

## Batch Slide Loading – Kalra

Dispensing robot must be interrupted to load or unload



## Independent fluidic manifold-based sample processing system

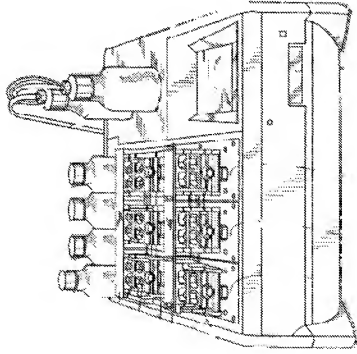


Custance – cited by Examiner in Office  
Action as primary 103(a) reference

Regulates temperature of samples, but  
not reagents

System has no robotic dispenser nor  
robotic motion. Rather it is a fluidic  
manifold-based system not suitable  
loading batches of sample carriers either  
in historical batch mode or continuous  
loading batches since samples are loaded  
manually into processing chambers

Not combinable with system using robotic  
dispensing of reagents,



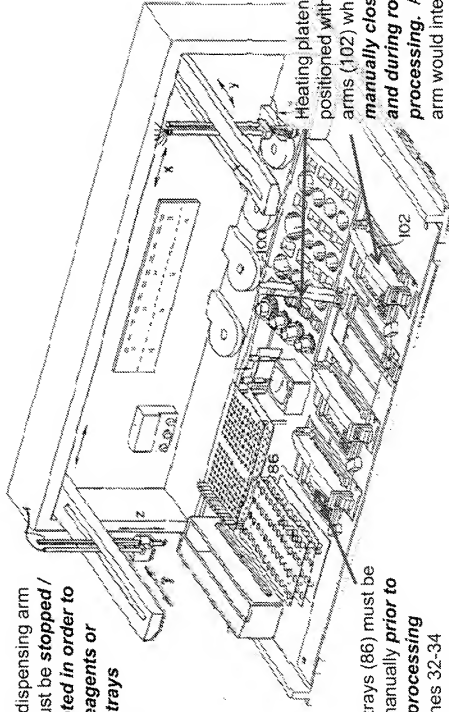
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# Batch Slide Loading – Reichler

(Dispensing robot must be interrupted to load or unload reagents and slides)



Robotic dispensing arm (190) must be **stopped / interrupted in order to insert reagents or sample trays**



Sample trays (86) must be loaded manually **prior to robotic processing**  
col. 17 lines 32-34

Heating platens (100) positioned within pivotable arms (102) which **must be manually closed prior to and during robotic processing**. An open arm would interfere with robotic arm motion.

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# Timeline

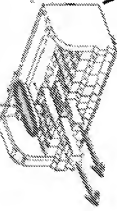
1995

**Becton Dickinson System**  
 "Riechler" cited in 103(a) OA  
*batch (not for slides)*



2004

**Dako Eridan**  
 continuous loading w/  
 temp control slides & reagents



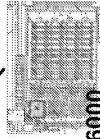
2008

**Biocare Intellipath**  
 continuous loading w/  
 temp control slides & reagents



1999

**Biogenex i6000**  
 "Kaira" cited in OA  
*batch*



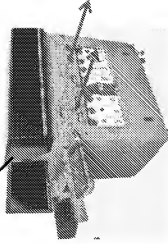
2003

**Biocare IQ Kinetic Slide Stainer**  
*batch*  
 no temp ctrl



2008

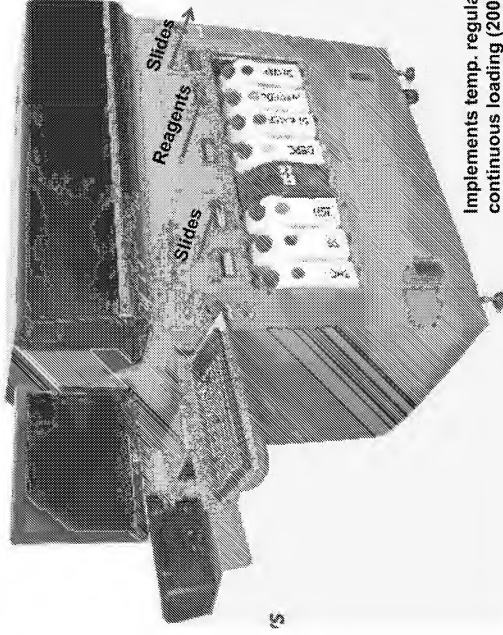
**Biogenex Xmatrx II**  
 continuous loading w/  
 temp control slides & reagents



## Dako Embodiment of the Invention (2003)



Competitors have recently implemented  
Dako Invention (2008/2009)

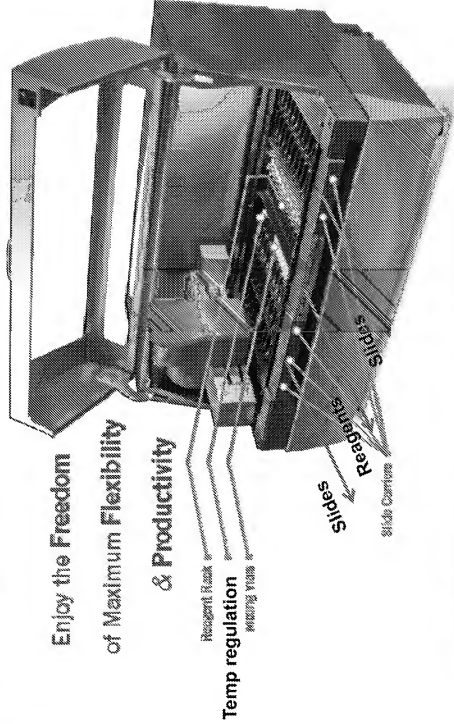


Implements temp. regulation w/  
continuous loading (2008/2009)

Competitors have recently implemented  
Dako Invention (2008/2009)



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Flexible, fully open system

Convenience, productivity and ease of use

Continuous random access workflow

High speed and throughput

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